UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/014,106
Filing Date: December 11, 2001
Appellant(s): BROWN ET AL.

Theodore Naccarella
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2/5/2008 appealing from the Office action mailed 7/24/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which

will directly affect or be directly affected by or have a bearing on the Board's decision in the pending

appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

20020111814   Barnett et al.   8/2002

Sycara et al. Multi-Agent Infrastructure, Agent Discovery, Middle Agents for Web Services and

Interoperation," Multi-Agent Systems and Applications: 9th ECCAI Advanced course ACAI 2001 and

Agent Link's 3rd European Agent Systems Summer School, EASSS 2001, Prague, Czech Republic, July

2-13, 2001, Selected Tutorial Pages. pp. 17-49. Springer Berlin.

Project JXTA Collab.Net, Inc., May 15, 2001,

http://web.archive.org/web/20010515211442/http://www.jxta.org

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-4, 7, 11-28, 31, and 35-48 are rejected under 35 U.S.C. 102(e) as being anticipated by

Barnett et al. (US 2002/0111814 A1).

In regard to claims 1 and 25, Barnett disclosed:

determining and describing Web services software modules that are available at a corresponding

network node, said Web services software modules comprising executable software modules that

can be exchanged between nodes of a network and run at said nodes; paragraph [0038]

generating messages to be transmitted to other containers via a network disclosing said

Web services software modules that are available at said corresponding network node;

paragraph [0036]

receiving and deciphering messages disclosing Web services software modules that are

available at other network nodes corresponding to other containers; paragraph [0038] *and*

causing the dynamic reconfiguration of said Web services software modules available at

said corresponding network node on said network based on said transmitted and received

messages, including the exchange of said Web services software modules between said network

nodes; paragraph [0035]

wherein said container is in the form of a Web services software module. Paragraph [0037]

In regard to claims 2 and 26, Barnett disclosed:

transmitting messages to other containers requesting said other containers to return copies of Web

services software modules; *paragraph [0049]* and

responsive to receipt of messages from said other containers requesting copies of Web services

software modules available at said corresponding network node, for sending copies of said requested

Web services software modules to said requesting containers. *Paragraph [0049]*

In regard to claims 3 and 27, Barnett disclosed:

generating messages that are hardware and software platform independent. *Paragraph*
[0007]

In regard to claims 4 and 28, Barnett disclosed:

transmitting said messages to and from a Web services registry; and

receiving said messages from a Web services registry. *Paragraph [0038]*

In regard to claims 7 and 31, Barnett disclosed:

>   transmitting messages executable instructions uses a peer to peer messaging protocol between said
>
>   containers and said computer readable code for receiving and deciphering messages uses a peer to
>
>   peer messaging protocol between containers. *The use of JAVA and CORBA in Barnett is a peer-to-*
>
>   *peer messaging protocol. Paragraph 0048, Paragraph 0028, Paragraph 0058.*

In regard to claims 11 and 35, Barnett disclosed:

>   receiving client requests for use of a Web services software module from client computers via said
>
>   network. *Paragraph [0035]*

In regard to claims 12 and 36, Barnett disclosed:

>   responsive to receipt of one of said client requests from a client for a Web services software module
>
>   that is not available at said corresponding network node; *paragraph [0038]*

>>   determines, based on said received messages disclosing said Web services software
>>
>>   modules that are available at other network nodes, whether another network node has a
>>
>>   copy of said particular Web services software module; *paragraph [0035]* and

>>   invokes a proxy to another of said containers having a copy of a particular Web services
>>
>>   software module based on said determination. *Paragraph [0035]*

>>   *In regard to claims 13 and 37, Barnett disclosed:*

>   routing said client requests for a Web services software module that is not available at said
>
>   corresponding network node and has been determined to be available at another network node to
>
>   another container corresponding to said another network node; *paragraph [0035]*

>   receiving responses to said client requests from said another network node; *paragraph [0035]* and
>
>   returning said responses to said requesting clients. *Paragraph [0035]*

>   In regard to claims 14 and 38, Barnett disclosed:

receiving said client requests routed from another of said containers and causing said client requests

to be handled by a copy of said particular Web services software module at a network node

corresponding to said container to generate said response; *paragraph [0049]* and

transmitting said response to said another container that routed said client request to said container.

Paragraph [0049]

In regard to claims 15 and 39, Barnett disclosed:

determining a load of client requests at said corresponding network node; *paragraph [0038]* and

the dynamic reconfiguration of Web services software modules performs said dynamic

reconfiguration based on said load determination. *Paragraph [0038]*

In regard to claims 16 and 40, Barnett disclosed:

responsive to determination of a load of client requests for a particular Web services software module

that is not available at said corresponding network node exceeding a predetermined level, issues a

message requesting a copy of said particular Web services software module from another container

that has a copy of said particular Web services software module; *paragraph [0039]*

receiving and locally invoking said particular Web services software module from said other container;

paragraph [0039 and 0037] and

routing client requests for said particular Web services software module to said local invocation of

said particular Web services software modules. *Paragraph [0039 and 0035]*

In regard to claims 17 and 41, Barnett disclosed:

offloading said particular Web services software module received from said other container

responsive to said load of client requests for said particular Web services software module dropping

below a second predetermined level. *Paragraph [0039]*

In regard to claims 18 and 42, Barnett disclosed:

responsive to determination of a load of client requests for a particular Web services software module

available at said corresponding network node exceeding a predetermined level, issues a message

requesting another container to accept a copy of the code of said particular Web software modules; *paragraph [0039]* and

sending a copy of said code of said particular Web services software module to said other container responsive to affirmative responses to said message requesting another container to accept a copy of the code of said particular Web services software module. *Paragraph [0039]*

In regard to claims 19 and 43, Barnett disclosed:

reconfiguring said computer program product to route client requests for said particular Web services software module to said other container. *Paragraph [0037]*

In regard to claims 20 and 44, Barnett disclosed:

said other container comprises a plurality of other containers. Paragraph [0038]

In regard to claims 21 and 45, Barnett disclosed:

reconfiguring said computer program product to route client requests for said particular Web services software module to said other container distributes said client requests for said particular Web services software module between said other containers and said local invocation of said particular Web services software module. Paragraphs [0037]-[0040]

In regard to claims 22 and 46, Barnett disclosed:

wherein said client requests indicate whether said requesting client has a container and a platform on which said client is running and wherein said computer program product further comprises computer executable instructions to read said client requests to determine whether said client has a container and said platform. Paragraph [0037]

In regard to claims 23 and 47, Barnett disclosed:

sending a copy of the code of a particular Web services software module responsive to a client request for said Web services software module. Paragraph [0049]

In regard to claims 24 and 48, Barnett disclosed:

monitoring usage of Web services software modules by clients; and

charging said clients for said usage. Paragraph [0046]

Claims 5-6, 8-9, 29-30 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett in view of Sycara ("Multi-Agent Infrastructure, Agent Discovery, Middle Agents for Web Services and Interoperation," <u>Multi-Agent Systems and Applications: 9th ECCAI Advanced course ACAI 2001 and Agent Link's 3rd European Agent Systems Summer School, EASSS 2001, Prague, Czech Republic, July 2-13, 2001, Selected Tutorial Pages</u>. pp. 17-49. Springer Berlin.)

In regard to claims 5-6, 8-9, 29-30, and 32-33, Barnett disclosed a dynamic web services exchange infrastructure. Barnett failed to disclose the use of UDDI, SOAP, or WSDL as protocols for use with Web Services. Barnett disclosed that other software could be used other than Jini in paragraph [0048]. Sycara disclosed that UDDI, SOAP and WSDL were receiving "increased visibility" in the field of Web services as protocols. See Sycara, page 18. Because Barnett disclosed other protocols could be used in the design of Barnett, and Sycara disclosed other protocols that were being used in distribution of Web services, it would have been obvious to one of ordinary skill in the art at the time of the invention to use UDDI, SOAP, and WSDL with Barnett's invention.

Claims 10 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett in view of Project JXTA (Collab.Net, Inc., May 15, 2001, <u>http://web.archive.org/web/20010515211442/http://www.jxta.org</u>).

In regard to claims 10 and 34, Barnett disclosed a dynamic web services exchange system using Jini, which is a cross-platform protocol. Barnett disclosed other protocols than Jini could be used in paragraph [0048]. Barnett failed to disclose the use of JXTA as a protocol for transmitting messages between platforms. However, Project JXTA showed that on April 25, 2001, Project JXTA went live as an open sources effort to create an open, generalized protocol that interoperates with any peer on the network including PCs, servers, and other connected devices. Because Barnett described the use of a cross-platform protocol, Barnett gave suggestion that other protocols could be used, and because Project

JXTA was expressly designed as a cross-platform protocol for transmitting messages between peers as described in "What is Project JXTA?", and because Project JXTA is open source, therefore allowing more developers to make use of the protocol, it would have been obvious to one of the ordinary skill in the art at the time of the invention to use the JXTA protocol with the Barnett invention.

(10) Response to Argument

Appellant argues that Barnett fails to disclose "determining and describing web services software modules that are available at a corresponding, local network node." Appellant misrepresents the Barnett reference. Barnett teaches a system which presents network services available through a web browser. This presentation is performed dynamically so that the services can be used instantly. See Barnett, [0020], [0028]. Barnett [0036] teaches that a user is provided information "thereby determining which services...are available". Barnett [0038] further discloses presenting information to a user about servers that it is not immediately attached to.

Appellant argues that Barnett fails to disclose instructions for generating messages to be transmitted to other containers via a network disclosing said web services software modules that are available at said corresponding network node. Barnett [0036] teaches that a user is provided information "thereby determining which services…are available." All elements of the claim are taught by Barnett. Appellant is apparently arguing that even though all elements are taught by Barnett, that Barnett fails to teach the invention because all elements are not present at a single location or server. Barnett teaches all limitations. Furthermore, nothing in the claim language requires all elements of the claim to be present at a single node or server. Appellant has claims encompassing both a method and a computer program product, and neither type of claim requires all elements to be present at a single node in the server, much less a single piece of software.

Appellant argues that Barnett fails to disclose a container is a "Web service". The claims state that a container is in the form of a "Web services software module." Appellant admits Barnett in [0037] discloses a servlet. A servlet is an "executable software module that can be exchanged between nodes of a network and run at said nodes", per Appellant's own definition of a "Web service software module".

Addressing Appellant's argument that a Web service and a Web services software module are the same, Respondent disagrees. A Web service is a service performed over the web. The Web services software module is the software or means for performing the web service. Web services and Web services software modules are not one and the same.

Appellant argues that Barnett does not disclose exchanging contextual information between containers. Barnett [0036] teaches that a user is provided information "thereby determining which services...are available."

Appellant argues that Barnett fails to disclose a "software module that manages the life cycle of Web services available at the corresponding network node." Barnett [0036] teaches that a user is provided information "thereby determining which services...are available." No claim limitations are presented referring to a "life cycle" of Web services.

Appellant argues that Barnett fails to disclose "said computer executable instructions for transmitting messages uses a peer to peer messaging protocol between said containers and said computer executable instructions for receiving and deciphering messages uses a peer to peer messaging protocol between containers." Barnett teaches the use of both JAVA and CORBA for messaging between clients in paragraphs 0028, 0048, and 0058. Appellant claims no reference was made by Respondent to the Barnett reference for this limitation. See Final Rejection, 7/24/2007, page 5, paragraph 17.

Appellant argues that Barnett fails to disclose exchanging Web services between nodes in claims 16 and 40. Claims 16 and 40 do not claim the exchange of Web services between nodes.

Appellant argues that Barnett fails to teach dynamic reconfiguration of Web services in claims 12 and 36. See Barnett, [0035], where services which are dynamic automatically appear on the UI screen, referring to this "dynamic feature" as one of the primary benefits of Barnett.

Appellant's arguments for claims 13 and 27 are the same as the arguments for claims 12 and 36.

Appellant argues claims 14 and 38 claiming receipt of a request of a proxy container. Claims 14 and 38 actually claim that a service can be downloaded and/or copied to a computer. [0049] teaches that an executable object for a service may be downloaded in order to execute the service.

Appellant argues claims 17 and 41 claim offloading a web service after the load drops. [0039]

teaches a Load balancer that works based on the last time a ComputeServer completed a job. When a

job is completed, the load drops.

Appellant argues claims 18-19 and 42-43 teach a dynamic load balancing scheme not present in

Barnett. [0037] and [0039] teach load balancing with web services.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals

and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Jeffrey R. Swearingen

/J. R. S./

Examiner, Art Unit 2145

Conferees:

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